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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/725,437

11/29/2000

Farooq Ullah Khan

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EXAMINER

QURESHI, AFSAR M

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

03/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/725,437	Applicant(s) KHAN ET AL.	
	Examiner AFSAR M. QURESHI	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. This Office Action is responsive to amendment received on 12/18/2008.

Response to Arguments

2. Applicant's arguments filed 12/18/2008 have been fully considered but they are not persuasive.

Applicant argued that the DLCI field in the English (US 5,305,308) reference is the frame end-to-end address field and not an identifier and that it has nothing to do with the number of parallel channels in the transmission system (page 2 of REMARKS).

English reference is concerned with processing speech compression, packetizing the process communications including, in each frame, a DLCI identifying the corresponding channel element of a particular cell. The identifier, DLCI **prepends** to each frame board and port addresses, as cited by the applicant that identify the frame's destination differentiating the individual packets within the same data transmission. Further, the DLCI, of English reference, refers to a cluster controller at the cell in an outbound direction and specifically identifies a corresponding radio channel.

Applicant further argued that the proposed combination of English and Ratzel (US 6,873,615) cannot be made.

Examiner, respectfully, disagrees. One object of the Ratzel invention is to distinguish repeated packets from one it has already received. However, The sequence numbers assigned to packet are not infinite in extent. The DLCI, disclosed by English,

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cures this problem, by identifying particular cell. (See col. 4, line 59 through col. 5, line 2, and, col. 16, line 49 through col. 17, line 2).

Furthermore, the rationale to combine or to modify the prior art does not have to be expressly stated in the prior art. The rationale may be expressly or impliedly reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles or legal precedent established by prior case laws. During examination the pending claims are given their broadest reasonable interpretation consistent to those skilled in the art.

In light of above explanation, Examiner maintains the following rejection.

3. *The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.*

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ratzel (US 6,873,615) in view of English et al. ("English" hereinafter), US 5,305,308.

Ratzel discloses a method of transmitting a sub-packet in a system utilizing ARQ. The method steps include: transmitting a subpacket by attaching a sequence identifier, a user identifier and an encoder packet identifier, PKT_ID (see figures 3 and 5, col. 3, lines 31-32), each remote station (user) has a unique factory assigned identifier (User ID. Col. 2, lines 29-30 and col. 3, lines 12-21); a sequence identifier 58 wherein the data

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packet is transmitted with identifiers to the destined user as identified in the user identifier ((see col. 3, lines 49-58).

However, the encoder packet identifier, PKT-ID, identifies the packet type including configuration information of network. It does not explicitly disclose of information that the packet identifier corresponds to at least a number of parallel channels in the transmission system.

English discloses a CDMA cellular radio-telephone system (fig. 2) where traffic is packetized into LAPD frames (fig. 7) comprising, among other fields, packet identifier (DLCI) that identifies (corresponds to) parallel channels (see Abstract, col. 4, lines 59 through col. 5, lines 2, col. 16, lines 49 through col. 17, lines 2, and col. 13, line 59 through col. 14, line 12).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to be able to incorporate, in a packet bearing frame of Ratzel, a data link connection identifier in order to identify packet when securing a retransmission of the same packet or in case it needs to be discarded, as taught by English.

It is noted that English is not directly concerned with ARQ, however, the prior knowledge of reconfiguring a packet bearing frame can be utilized by one of ordinary skill in the art.

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5. Claims 2-9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over combined invention of Ratzel and English (US 6,873,615) and further in view of Rathony et al. (US 6,359,877).

Claims 2-5. In addition to the above disclosure by Ratzel/English, Rathonyi et al. ('Rathonyi' hereinafter), in the same field of endeavor, also discloses method of transmitting sub-packets (col. 5, lines 59-61 – smaller size packets) utilizing hybrid ARQ scheme (see col. 14, lines 24-41, col. 5, lines 7-19) wherein the packets are given sequence numbers and packet identifiers in the header part comprising bits indicating first transmission or re-transmission corresponding to number of channels and rate (see col. 14, lines 51-67). One skilled in the art would readily realize the number of bits to be assigned based on number of channels.

Claims 6-9. As to claim 6, Ratzel discloses an ARQ acknowledgment informing originating station that a DATA packet was successfully received (col. 3, lines 59-65) but does not specifically disclose receiving NACK if the originating station fails to receive the ACK message. In an ARQ scheme, used herein, receiving NACK is inherent as disclosed by Rathonyi. Rathonyi discloses receiving a NACK from the user identified by the user identifier (fig.3D); attaching a second sequence identifier to a new version of the first sub-packet to produce a new version sub-packet with identifiers (col. 10, lines 4-8, the new version first sub-packet being soft-combinable with the first sub-packet (col. 14, lines 22-41).

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As to claims 7-9, Rathonyi discloses that the new version of sub-packet may be identical or may not be identical depending on transmission rate at the time when a sub-packet is retransmitted over different channel (see col. 8, lines 48-57, also see col. 5, lines 7-32).

Therefore, it would have been obvious to one skilled in the art, at the time of invention, to be able to modify Ratzel/English by utilizing sequence numbering scheme and incorporating the procedure of receiving NACK from the user identified by the user identifier, as taught by Rathonyi. The obvious motivation would have been to achieve efficient forms of messaging and/or transmitting and receiving data between radio stations thus avoiding repeating or discarding messages (see Ratzel col. 1, lines 36-46).

Claims 11-13. As to claim 11, in addition to the limitations discussed in the rejection of claims 1-9 above, Rathonyi discloses soft combining the received sub-packet with a previously received sub-packet having an identical encoder packet (see Abstract, col. 5, lines 26-32, also, col. 14, lines 22-41).

As to claims 12 and 13, received sub-packet and previously received sub-packet having identical packet ID received over channels identical or different is discussed in the rejection of claims 7 and 8 (see col. 8, lines 48-57, also see col. 5, lines 7-32).

Therefore one of ordinary skill in the art, at the time of invention, would be motivated to modify Ratzel/English utilizing soft-combining techniques in order to achieve an increased probability of successful decoding that in turn will result in an increased throughput and reduced overhead in variable rate packet-retransmission as supported by hybrid ARQ scheme.

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6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

EP 1049336 A2, Applicant: Sarnoff Corporation, Inventors: Acampora et al.

Bauchot (US 5,970,062); Wolfgang (US 6,609,223).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AFSAR M. QURESHI whose telephone number is (571)272-3178.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272 7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

3/3/2009

/Afsar M Qureshi/
Primary Examiner
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